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SOURCE Termesztudományok és Technika, Vol CX, No 7, 1951.HUNGARY CONDUCTS HYDROBIOLOGICAL RESEARCH

The newly reestablished Institute for Research on Lakes and Fish, under the direction of Professor Maucha, is located near the Plant Genetics Institute at Budapest. Nine researchers at the former institute are engaged in the following general problems which must be solved during the course of the Five-Year Plan: study of the productive capacity of lakes and other fresh-water collection basins, with respect to improving fish production; artificial-hatching of eggs of the more valuable fish, sturgeon, perch-pike, catfish, and carp; selection of carp to build up stocks of the desirable types which died out during the war; and continuation of the fight against the carp water disease, a virus disease which exists in several lakes. The researchers also engage in self-initiated basic research projects.

Fishing by means of electricity is beginning to offer competition to net fishers. The selection of a rapidly maturing type of carp made it possible to relate fish breeding to rice culture, and to assure a yield of at least 50 kilograms of fish per hectare. The relation of fish breeding to duck raising is also under discussion.

The Five-Year Plan of the Hungarian Academy of Science includes increasing the annual catch of perch-pike, one of Central Europe's most popular fish, from 350,000 to 500,000 fish. In connection with studying the feeding habits of the perch, the Fish Biological Institute has made interesting discoveries on the habits of the perch and the biological balance of fresh water life in general.

The perch is also being studied at the Tihany Institute on Lake Balaton, where greatly improved methods of fish breeding have recently been put into practice. The new methods include hatching fish eggs outside of water, in constantly moistened nests of twigs, which are kept in damp rooms. Maintaining adequate ventilation, 3 million eggs may be handled per cubic meter. Thus, 15 million newly hatched fish have been added to the lake per year.

The number of researchers at the Tihany Institute, reduced to three by 1944, is now 14. The researchers are divided into four groups. They are engaged in problems covering four different fields. Thus, the Tihany Institute is not concerned solely with the Balaton Lake area.

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At an interview, Professor Horvath, microbiologist and director of the institute, listed three fields of research covered there which have practical significance: research on yeast genetics, with respect to preventing dissolution; study of the antagonism of bacteria and ray fungi in cultures; and the production of vitamin D as a result of microbe oxidation.

The plant physiology department is occupied mainly with the vegetative hybridization of species of tomatoes and has established that the first generation is definitely a hybrid. Soil acclimatization in 86 types of grasses and chemical isolation by enzymatic means of lignin, hemicelluloses, etc., are also being studied.

Animal research is concerned chiefly with rabbits, and an attempt is being made to arrest degeneration by crossbreeding with wild types. Research on rabbit biology has achieved positive results in connection with the thyroidal system. Comparative experiments are being conducted on various types of animals, concerning the utilization of cellulose in nutrition. Another project concerns crossing house mice with field mice. Professor Krompecher is carrying on successful experiments in developing new bone joints in dogs.

The hydrobiological department is carrying on research on perch. Professor Bela Entz and two coworkers are continuing the research on Lake Balaton, started by Bela Entz senior, the famous hydrobiologist. Studies of variations in the chemical composition of the lake water at different times of the day and of the year will lead to a better understanding of the biology of the lake and the potentialities of its exploitation.

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